

STORAGE DEVICE FOR MEDICAL SWABS

CROSS REFERENCE TO RELATED APPLICATIONS

[0001] This application is a divisional application of Application No. 09/308,408, filed June 28, 1999, which is the National Stage of International Application No. PCT/EP97/05609 filed September 10, 1997.

BACKGROUND OF THE INVENTION

Field of the Invention

[0002] The invention relates to a storage device for swabs, in particular, sterilized medical swabs.

Description of Prior Art

[0003] Medical swabs are kept in stock sterilized in a multipack. They are used singly and are taken singly from a multipack. After opening of a multipack and removal of the first swab or swabs, the sterility of the remaining swabs in stock is no longer ensured so that they have to be resterilized. It is not possible to ensure sterility of the swabs present in a multipack once it has been opened even if the multipack is disposed in another, secondary pack.

Summary of the Invention

[0004] The invention is based on the object of producing a storage device which allows sterilized swabs to be removed one at a time or singly, while ensuring the sterility of the remaining swabs in stock in the storage device. It is an additional intention to minimize the space required for the storage device.

[0005] This object is achieved in a storage device characterized in that the envelope is formed by adjacently disposed chambers, which are sealed bacteria-tight, for the swabs, the size of the chambers being determined by the number and the size of the swabs kept in stock in each of these, and in that the envelope can be kept in stock rolled up or concertinaed.

[0006] The storage device according to the invention has an envelope consisting of single chambers for the swabs; these chambers are sealed bacteria-tight, and can be disposed adjacently. The size of the chambers is determined by the number and the size of the swabs kept in stock in each of them, it being intended, so ensure absolute sterility, that only one swab should be kept in stock in one chamber, so that each swab can be removed sterilized from the storage device. For areas of medicine where a large number of swabs is used, the sterility of a second swab which is kept in stock and, after removal of the first swab, remains for a short time in the same chamber, is likewise ensured so that it is also perfectly possible for two swabs to be kept in stock in one chamber in a storage device for swabs used in such areas. The envelope must be sufficiently flexible so that it can be kept in stock rolled up or concertinaed.

[0007] To this end, the envelope can consist of a flexible base layer and of a flexible covering layer bonded thereto, and one of these layers has areas of convexity relative to the other layer to form the chambers.

[0008] It is possible to provide strips intended to be torn through between the chambers in order to facilitate removal of a swab from the storage device and in order to improve overall the convenience of using the latter.

[0009] The chambers can be provided in a row or in several parallel rows and, in order to save space, the chambers in adjacent rows can be disposed offset relative to one another in order to minimize the spaces between.

[0010] The chambers can be formed in a simple manner by receiving depressions in the base layers which are covered by the covering layer. It is also possible, moreover, for each receiving depression to be sealed by an isolated covering layer.

[0011] The receiving depressions can moreover be produced by a thermoforming process, and the disposition of the covering layer or of the individual covering layers can take place by welding or sealing in order to produce integral bonding between the layers.

[0012] To facilitate opening of the chambers, they can be provided with aids to opening known to a skilled person. The convenience of use of the storage device according to the invention can be considerably improved by it being disposed rolled up or concertinaed in a dispenser in the form of a secondary pack which has a removal opening for one or, where appropriate, more than one chamber disposed side by side. The dispenser can be used in the vertical or horizontal position.

Brief Description of the Drawings

[0013] The invention is explained hereinafter by means of an exemplary embodiment.

The relevant drawing shows:

[0014] Figure 1: a section through a portion of a storage device according to the invention; and

[0015] Figure 2: a perspective view of the storage device.

Detailed Description of the Preferred Embodiment

[0016] The storage device depicted in section in Figure 1 has an envelope 3 which consists of a flexible base layer 1 made of polyamide/polyethylene and a flexible covering layer 2 (made of sterilization kraft paper), and which is provided with chambers 4 each for one swab 5. The chambers 4 are formed by the receiving depressions 6 provided in the base layer 1 and by the covering layer 2 disposed on top of these, and are sealed by this base layer 1 in the areas between the receiving depressions 6. This means that the swabs 5 kept in stock in the chambers 4 are sealed bacteria-tight. The welding points are provided simultaneously as strips or points 7 intended to be torn through, with reduced thickness of the covering layer. The chambers 4 are disposed one after the other in a row.

[0017] Figure 2 shows the storage device with envelope 3 rolled up. A dispenser 8 is indicated by dashed lines, and it surrounds the rolled-up envelope 3 and has a removal opening 9 through which the envelope 3 can be pulled and divided into single chambers at the strips 7 intended to be torn through. The chambers 4 are opened by pressing a finger on the covering layer, causing it to tear inwards.

[0018] The invention has been described with particular emphasis on the preferred embodiments. It should be appreciated that these embodiments are described for purposes of illustration only, and that numerous alterations and modifications may be practiced by those skilled in the art without departing from the spirit and scope of the invention. It is intended that all such modifications and alterations be included insofar as they come within the scope of the invention or the equivalents thereof.